

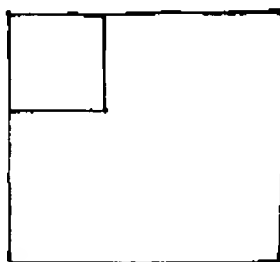
view, that the function crops a section of the original negative. For example, on page 23 the cropping function is described in which an original digital negative having dimensions of 5760 x 7200 pixels is cropped to a rectangle having corners at 30,20 and 110,80.

The Examiner says that this results in a change in resolution since the image size has changed. Applicant disagrees. Applicant respectfully submits that it is not necessarily true that a change in resolution has occurred simply because the image size has changed. The meaning of "resolution" in the context of applicant's invention is the meaning of the term to one of ordinary skill in the art. The written description is the first place to turn to understand what applicant means by "resolution". In the description of the relevant art, applicant gives a clear indication of the meaning of resolution in connection with this invention. Applicant describes digital image processing programs, such as Adobe Photoshop, that perform operations directly on the raw pixels of an image. These applications perform image operations on only one resolution, usually the highest resolution, and are therefore slow. The application suggests that if a software application could work at a lower resolution for display purposes, the processing time would significantly decrease. What is inescapable from this description is that as used in this application, resolution means the number of bits of information that make up a particular image. Digital cameras provide a convenient way for thinking about this concept. Digital cameras are available in a wide range of resolutions. Some capture an image in 1,000,000 pixels, some capture the same image in 4,000,000 pixels, and others capture the image in 8,000,000 pixels. Intermediate values are also available. In each case, the number of pixels used to capture the particular image is what is meant by the resolution of the camera. An 8 mega pixel camera is considered to have higher resolution than a 2 mega pixel camera. When applicant talks about

creating a low resolution image, what is meant is representing the same original image with less data, usually a smaller number of pixels. The same image is represented, but the number of pixels used to represent the image is smaller. This is what is meant by a lower resolution image.

The ImageCropRect function of the reference is, as the Examiner might put it, glaringly different. The function selects a portion of the original image without making any change in the number of pixels that make up that portion. While the total number of pixels in the cropped image may be less than the total number of pixels in the original image, the resolution of the cropped portion has not changed. The number of pixels in the cropped image is exactly the same as the number of pixels in that portion of the original image. Returning to the camera analogy, this is like taking an 8 mega pixel image and dividing it into two halves, each containing 4 mega pixels. The resolution of the two halves is the same as the resolution of the 8 mega pixel image since in fact exactly the same data is present. It is not the same as the lower resolution of a 4 mega pixel camera which, if it were used to create the same two halves of the original image, would contain only two mega pixels in each half.

If one considers for a moment how using the ImageCropRect function of the reference to create the lower resolution image required by the claim (specifically stated in claim 2 one can see why the Examiner's proposed construction will not work. The ImageCropRect function selects a portion of the original high resolution image as follows:



This cropped image, even though it contains less data than the original image and could presumably be transferred over a low band width connection more quickly than the original image, would not permit the original image to be edited, but would only permit the cropped portion to be edited and as to that portion, the resolution is exactly the same as in the original image so no advantage is obtained.

This is described at page 10, lines 11 et seq. where it states:

..."It should be noted that an additional advantage of the invention is that the resultant proxy image can be very small and dependent upon a specific device. For example, the resultant proxy image derived from a set of edit operations applied by a digital camera having a small LCD display may in fact be a low-resolution thumbnail image. In this way, the resultant proxy image will be properly displayed and optimized for the LCD display on the camera. By using a linked edit list, the editing operations can be applied on the full resolution version of the original high-resolution image (i.e., the digital negative) at a later time whenever a higher-resolution resultant image is needed".....

It could not be clearer that the lower resolution image required by the claims is a lower resolution version of the original image, not a selected portion of the original image at the original resolution.

The Examiner notes that claim 1 states nothing about the second resolution and format being distinct from the first resolution and format. While applicant believes that this is inherent in the claims, applicant has amended claim 1 to state that the second resolution and second format are different from

the first resolution and first format. Claim 2, which is not separately treated in the Office Action, quite clearly states that the first resolution is higher than the second resolution which the Examiner has not addressed separately.

The Examiner suggests that a potential 112 first paragraph written description issue may arise that the claims are amended to recite a different second format. The Examiner invites applicant to identify those sections of the written description that describe the second format to be different from the first. Applicant directs the Examiners attention to the following sections of the written description.

Page 2, first paragraph, describes the digital image processing programs that operate directly on the raw pixels of an image. At the bottom of page 2 this original high resolution image is referred to as a digital negative. The low resolution image is described at page 4 as being generated in a common format such as JPEG, TIFF, or PNG so that anyone can view the resultant image, but with the knowledge of where it's distributed pieces (i.e., digital negative and edit list) reside.

The high resolution image (digital negative) and the lower resolution proxy raster image are mentioned at a number of points in the written description, for example at page 8 and page 9. Some of the examples, such as the one on page 28, line 14-18, describe the proxy images as in vector format such as Post Script, EPS, or PDF format which are incompatible with the digital negative raster format. Therefore, the formats must necessarily be different

Most importantly, applicant respectfully submits that the most significant difference between the digital negative and the proxy image is the resolution, not the fact that the formats are different. While the formats clearly could be different, what is necessary is that the resolution be different.

Referring now to Item 2, the Examiner points to page 23 and the statements beginning with "%%" that define the edit list. The Examiner notes that the command %% ImageFileName defines the file path where the path defines a location in a hard disk drive or the like of the original (digital negative). The Examiner fails to note that the actual claim language reads "associating an edit list based on the modifying with the resultant image". The section referred to by the Examiner does appear to include a reference to the original image but does not appear to include a reference to the resultant image as required by the claim.

Item 3. The claim requires determining an output resolution and an output format of the resultant image and converting the resultant image to the determined output resolution and the determined output format. The Examiner responds that the image dimensions determine the output resolution of the resultant image and the TIFFASCII Tag determines that format (i.e., TIFF). Applicant respectfully submits that image dimensions refers to the high resolution image, which makes perfect sense because that is the only reference in the section to which the Examiner refers. This confirmed by the text following the heading example 1 where the original image is described as a 5,760 x 7,200 – pixel image, the same numbers used in the Image Dimension entry. Applicant cannot find the reference to TIFFASCII Tag noted by the Examiner. Perhaps it is on another page?

Applicant is uncertain as to the suggested importance of the line that reads:

8 6 % width and height of actual image data, and pixels
(this image is cropped)

What limitation is this line said to meet?

Regarding Claim 5, while applicant acknowledges that OPI generally discloses print servers and pre-press work stations, claim 5 is more specific. Claim 5 recites that the first node at which the storing, modifying, associating, and linking steps are carried out is a first computing device and the second node at which the fetching, determining, converting, and outputting steps are carried out is a second computing device. The Examiner does not point out where OPI discloses or suggests these limitations.

Regarding claim 6, the claim requires that the first computing device and the second computing device are linked in a peer to peer arrangement. The Examiner appears to acknowledge that OPI does not discuss this but argues that peer to peer arrangements simply requires a connection between servers. This is quite clearly not the case. A connection between servers could be a client server connection and nothing in OPI suggests otherwise. In fact, the language used by the reference, "OPI Consumer" and "OPI Producer", suggest that these are not peers because if they were, why would different names be used?

As to claim 7, applicant has argued that OPI relates to communication between software applications and the Examiner points to paragraphs 17 and 21. The applicant does not understand the reference. The definitions of OPI Producer and OPI Consumer are set forth specifically at page 4 in Section 1.1. OPI Producer means an application that writes OPI comments and OPI Consumer means an application that reads OPI comments. Nothing that the Examiner has identified modifies these explicit definitions and applicant continues to assert that these are indeed software applications.

Regarding claims 8-10, the Examiner points to pages 421 and 423 of the reference. Again, it is clear that OPI Producer and OPI Consumer are software applications, not computing devices.

The examiner argues that OPI Consumer reads the comments and performs the needed modifications. This is inconsistent with the description of OPI Consumer on page 21 where it states:

...OPI2 Consumers have a much simpler task than in earlier versions of OPI. With OPI2, all of the work to prepare the graphics state environment for the image is provided by the OPI2 Producer. The only remaining tasks for the consumer are to locate the correct high resolution image, separated if necessary, and insert the Image data into the Post Script language stream.

There is no discussion of modifying the image as claimed. Applicant notes the acceptance of the terminal disclaimer....

Applicant respectfully submits that for the reasons discussed above, the reference does not anticipate the Invention or render it obvious. Accordingly, reconsideration and favorable action are requested.

Respectfully submitted,

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Title: TECHNIQUES FOR GENERATING A DISTRIBUTED LOW-
RESOLUTION DIGITAL IMAGE CAPABLE OF VIEWING IN ANY
RESOLUTION

Transmittal of Amendment After Final (8 pgs.); Amendment Transmittal and return
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